

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 28 and 30-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant Admitted Prior Art (hereafter AAPA, citations refer to published specification) in view of Courtney et al. (US Patent#6469658).

Regarding claim 28, AAPA teaches a wireless microphone system comprising:

at least one antenna unit having an antenna and a circulator or an HF isolator being connected to the antenna (paragraph 0008).

But, AAPA does not expressly disclose said antenna and said circulator or said HF isolator being arranged in a common housing of the antenna unit; and wherein the antenna unit can be plugged in or screwed on such that the antenna unit is replaceable as a unit.

Courtney et al. teach in a RF transmitter where said antenna (36 of Fig. 2) and said circulator (24 of Fig. 2) or said HF isolator being arranged in a common housing of the antenna unit (Fig. 2); and wherein the antenna unit can be plugged in or screwed on such that the antenna unit is replaceable as a unit (column 7 lines 20-29).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the fixed antenna component of the wireless microphone system of AAPA

with replaceable antenna component of Courtney et al., in order to use components suitable for other frequency bands.

Regarding claim 30, AAPA and Courtney et al. teach a pocket transmitter microphone as explained in response to claim 28 above.

Regarding claim 31, AAPA and Courtney et al. teach a hand transmitter microphone as explained in response to claim 28 above.

Regarding claim 33, AAPA and Courtney et al. teach a wireless microphone device as explained in response to claim 28 above.

Regarding claim 35, AAPA and Courtney et al. teach a HF transmitter as explained in response to claim 28 above.

Regarding claims 32 and 34, AAPA and Courtney et al. teach the limitations of claims 28 and 33.

Courtney et al. teach wherein the antenna unit is tuned to a given frequency range (column 7 lines 22-24).

2. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant Admitted Prior Art (hereafter AAPA, citations refer to published specification) in view of Courtney et al. (US Patent#6469658) and Kawasaki et al. (US2002/0197957).
Regarding claim 29, AAPA and Courtney et al. teach the limitation of claim 28. AAPA and Courtney et al. teach a hand transmitter microphone or a pocket transmitter microphone, wherein at least one antenna unit is plugged in or screwed on to the hand transmitter microphone or the pocket transmitter microphone (paragraph 0008).
But, AAPA and Courtney et al. do not expressly disclose further comprising a receiver, and wherein at least one antenna unit is plugged in or screwed on to the receiver.
Kawasaki et al. teach a wireless microphone system having a transmitter microphone (101 of Fig. 1) and a receiver (102 of Fig. 1), where obviously antenna unit could be replaceable in view of Courtney's teaching (column 7 lines 20-29) for tuned frequency usage.
Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate a receiver for reception taught by Kawasaki et al. into the wireless microphone system of AAPA and Courtney et al., in order to receive microphone transmission with tuned frequency component.

3. Claim 36 is rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant Admitted Prior Art (hereafter AAPA, citations refer to published specification) in view of Courtney et al. (US Patent#6469658) and Conover (US Patent#6418377)
Regarding claim 36, AAPA and Courtney et al. teach the limitation of claim 35.

But, AAPA and Courtney et al. do not expressly disclose wherein the antenna unit comprises a visible identification, coding or color marking indicating the given frequency range.

Conover teach using color coding on antenna, so that purchasers can easily find the appropriate antenna (column 4 line 66 to column 5 line 3), which would have been obvious to one of ordinary skill in the art that the color coding could be modified into usage for frequency range coding in view Courtney et al.'s teaching on replaceable antenna unit for different frequency usage.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate using color coding on antenna product taught by Conover into the HF transmitter of AAPA and Courtney, in order to provide legend for purchasers to find the appropriate antenna unit.

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ZHIYU LU whose telephone number is (571)272-2837. The examiner can normally be reached on Weekdays: 9AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung can be reached on (571) 272-7882. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Z. L./
Examiner, Art Unit 2618

/Nay A. Maung/
Supervisory Patent Examiner, Art Unit
2618

Zhiyu Lu
June 11, 2008